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*Quality  
seed  
corn*

# PIONEER

*Announces*



**27 OUTSTANDING CORN HYBRIDS  
FOR 1939 PLANTING**





# PIONEER

announces twenty-seven superior corn hybrids for 1939 commercial planting. Twelve hybrids are available in quantity and only limited amounts of the other fifteen hybrids can be obtained. The hybrids obtainable only in limited amounts are relatively new combinations whose short records indicate unusual promise. PIONEER recommends their use only in limited quantity until their long-time consistency can be fully established by actual commercial planting.

## PERFORMANCE TESTED . . .

Every hybrid has been thoroughly tested for yield, maturity, standing ability, and strong germination. PIONEER carries on a complete program of scientific corn performance testing.

PIONEER performance tests are hand-planted, harvested, and computed with the same accurate methods used in the official State Corn Yield Tests. Over 100 such PIONEER test plots dot the cornbelt every year.

## GENERAL DESCRIPTION . . .

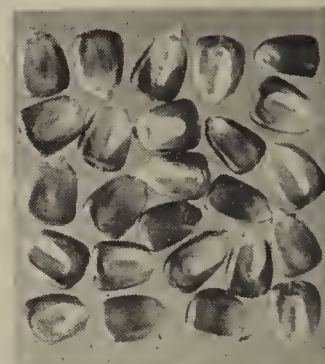
All PIONEER hybrid seed corn is:—truly hybrid; thoroughly tested for maturity, yield, quality, and lodging resistance; yellow in color; picked early in the fall; carefully ear-sorted and tipped; immediately kiln dried to 12 per cent



moisture; shelled; graded into four uniform kernel sizes; treated with mercury dust to insure vigorous growth in a cold, wet spring; healthy seed that germinates 95 per cent or better; put up in sealed, trade-marked bushel bags that are marked with specific PIONEER hybrid brand numbers; ready for planting.

## UNIFORM GRADING

PIONEER hybrid seed corn is graded accurately into four uniform kernel sizes. A specially built grading system removes all light, chaffy kernels, eliminates tips, and leaves only strong, healthy seed.



LARGE FLAT

Two flat kernel sizes, *large flat* and *small flat*, are available. Planted 42 inches each way, three kernels per hill, the *large flat* size averages 7 acres per bushel and the *small flat* kernels 8.5 acres per bushel.

Two round kernel sizes, *large round* and *small round*, are obtainable and when planted 42 inches each way, three kernels per hill, the *large round* size, put up in special bags holding 65 pounds, plants about 7 acres per bag and the *small round* kernels average 8.0 acres per bushel. The kernel sizes, of course, vary from season to season, depending on crop conditions.

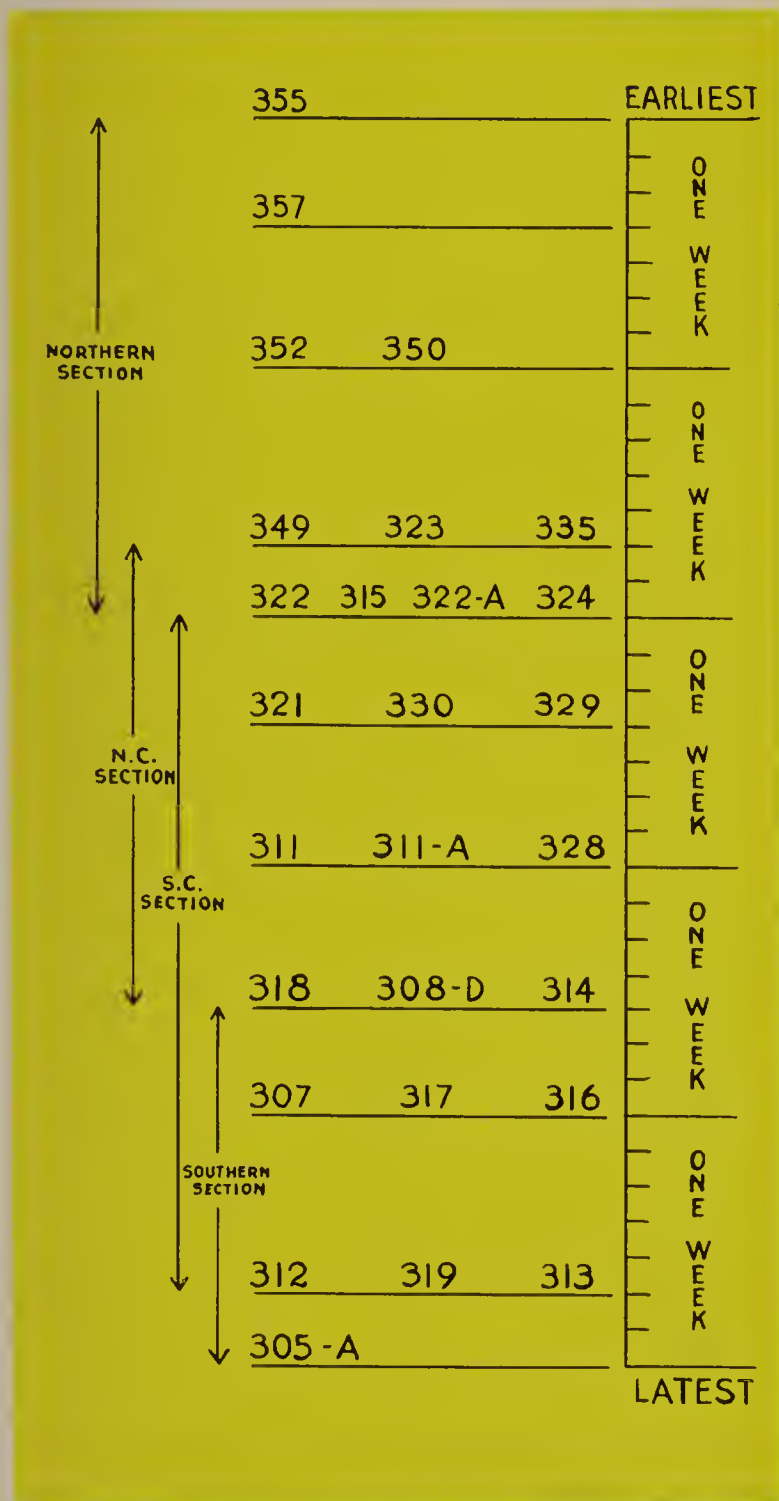
PIONEER offers its customers complete planter plate recommendations for each kernel size for most widely-used makes of planters.



*First commercial producer of hybrid seed corn*

# WHICH HYBRID FOR YOUR GROWING SEASON?

## APPROXIMATE MATURITY DIFFERENCES AMONG PIONEER HYBRIDS



## CONDITIONS AFFECTING MATURITY . . .

Farmers should make certain they plant hybrid seed corn suited to their growing season. Hybrid corn must be properly adapted in maturity to give the best results.

Late corn planted in northern sections is often caught by early frost unless the first damaging frost occurs very late in the fall as in 1937. Early corn raised too far south matures too quickly and a reduction in yield results.

PIONEER does not recommend unadapted corn in any territory unless the purchaser wishes to plant it for some special purpose such as silage corn, early feeding corn, or to raise early maturing corn that will escape hot summer winds.

Maturity records of PIONEER hybrids are based on the average moisture content of the corn about the middle of October. These tests are made in all parts of the cornbelt. Due to various conditions which affect the maturity of corn, estimated maturity differences given in the table will not always correspond with the actual maturity of PIONEER corn. However, under average weather and soil environment, maturity differences among PIONEER hybrids as shown are accurate.

Soil fertility, soil type, rain fall, and average temperature all play an important part in the maturity of corn.

Rich, well balanced soil with the proper amount of moisture pushes the corn along faster, while low fertility soil holds it back.

Farmers should plant corn to fit their local soil conditions. On rich ground, a later hybrid than is ordinarily recommended for a region can often be grown to advantage, while an earlier hybrid than is ordinarily recommended in a territory often gives the best performance on poor soil.

Cold weather retards the growth of corn, while ideally warm temperature hastens it. Too much or not enough rain fall also greatly affects the length of time necessary for maturity.

For the above reasons, the maturity period of any one hybrid varies somewhat from year to year. Even in the same season, a strain of corn planted in two different nearby locations will mature differently if the moisture and soil conditions show a variation. The map on Page 11 shows hybrids adapted to your location.

» » You can depend on proper maturity with



# RECORDS OF PIONEER HYBRIDS AVAILABLE IN QUANTITY

LISTED IN ORDER OF MATURITY . . . COMPILED FROM PIONEER TESTS

Popular PIONEER Hybrids 357, 322, and 307 Used as Checks

## NORTHERN SECTION

Pioneer No.	Years Tested	Yield % 357	Moist % 357	Ear Height % 357	*Lodging % 357
355	4	94	98	95	99
357	4	100	100	100	100
O.P.	4	79	102	99	147

In Northeastern Iowa, the Hybrids Below Are Late in Short Seasons

323	4	98	111	113	100
315	1	106	114	119	98
322	2	107	115	117	73

## NORTH-CENTRAL SECTION

		% 322	% 322	% 322	% 322
323	4	95	97	102	132
O.P.	4	78	99	104	171
322	4	100	100	100	100
315	4	101	100	102	133
311	4	93	102	104	109
308-D	2	106	102	124	104
311-A	4	93	103	104	104
314	1	102	111	119	105

## SOUTH-CENTRAL SECTION

		% 307	% 307	% 307	% 307
322	2	97	90	91	95
315	4	96	92	97	127
311	5	91	93	97	102
311-A	5	91	94	95	111
318	1	97	96	95	92
308-D	5	99	97	103	98
314	5	103	98	99	110
O.P.	5	76	99	103	167
307	5	100	100	100	100
317	3	107	102	95	90

## SOUTHERN SECTION

		% 307	% 307	% 307	% 307
308-D	5	99	97	103	98
314	5	103	98	99	110
O.P.	5	76	99	103	167
307	5	100	100	100	100
317	3	107	102	95	90

O.P.—Open-pollinated corn commonly grown in respective sections—inserted only for comparison.

\*In lodging column, the lowest percentage indicates the best lodging resistant corn.



*breeds Quality into every hybrid*

» » » »



# THEIR DESCRIPTION

LISTED IN ORDER OF MATURITY

## Pioneer 355 . . .

Extra early maturing—cold resistant—good yielding—satisfactory lodging resistance—medium-low eared—longer ears than open-pollinated strains grown in Northern Section—strong shanks that hold ears on stalk—very easy to pick—faithful standby in Northern Iowa for many years.

## Pioneer 357 . . .

Early corn—high yielding ability—strong roots—stiff stalks—smut resistant—medium length shanks—leafy plants—ears about waist high and well covered with husks—practically no damaged grain—very practical PIONEER cross for Northern Iowa.

## Pioneer 323 . . .

Two-eared variety—kernels well dented and dry quickly in the fall—medium height—very few dropped ears—loose husks—ideal for hand picking—BANNER TROPHY winner in 1929.

## Pioneer 322 . . .

The outstanding hybrid in the 1937 Iowa Corn Yield Test—won the BANNER TROPHY—Iowa Corn Yield Test report stated, "This combination stood up well, dropped few ears, and had lower than average per cent of damaged kernels"—sturdy, vigorous stalks and long, deep roots—drought and smut resistant—low ears—short shanks—medium size, moderately rough ears—long husks—high shelling percentage—hard to beat as practical, all-around hybrid.

## Pioneer 315 . . .

Medium-large ears—contains high percentage of oil—strong shanks—high yielding—in North-Central Section of Iowa Corn Yield Test, it stands at top of all hybrids with a three-year yield record, averaging 121.9% of open-pollinated strains—BANNER TROPHY winner in 1935—one of the best cold resistant hybrids on the market—germinates vigorously under cold, wet planting conditions.

## Pioneer 311 . . .

Stiff, strong stalks well anchored by heavy roots—firm, solid ears—strong shanks practically eliminate ear dropping—may smut a little in dry years—loose husks permit rapid drying in the fall—ideal to pick by hand or machine.

## Pioneer 311-A . . .

Often produces two ears to a stalk—satisfactory yielding ability—stands up well—practically no ear

dropping—may show a tendency to smut in dry years—firm, medium size ears—dries rapidly in the fall—easy to pick—1937 Iowa Corn Husking Contest held in field of 311-A.

## Pioneer 318 . . .

Large, coarse, starchy ears—deep roots and sturdy stalks—good quality corn—ears hang waist high—long husks—small per cent of grain damage—strong shanks keep ears from falling—excellent appearance in the field.

## Pioneer 308-D . . .

Two-eared stalks—medium-leafy plants—has good feeding value—high shelling percentage—stands up well—excellent silage and fodder corn—high yielding—averaged a yield of 139% of open-pollinated corn in a four-year PIONEER test—well adapted to mechanical picking.

## Pioneer 314 . . .

General purpose, one-eared variety—large, medium-rough ears—shells out well—strong shanks—cold and drought resistant—quite good lodging records—rather loose husks that permit quick drying in the fall—easy husking—outstanding yielder—won first place in District 8 of 1937 Iowa Corn Yield Test by yielding 8.42 bushels per acre more corn than the average of all hybrid entries.

## Pioneer 307 . . .

Excellent general-purpose hybrid for southern half of Iowa—produces long ears at desirable height—practically no fallen ears—excellent resistance against cold, smut, and drought—abundant foliage for silage and fodder—fairly loose husks—equally suitable for hand and mechanical picking—adapted to all soil conditions—exceptionally high yielding—superior lodging resistance—ranks first in yield and lodging grade among all hybrids with a two-year record in Southern Section of Iowa Corn Yield Test—averages a yield of 138.7% of open-pollinated varieties for both South-Central and Southern Sections of the Iowa Corn Yield Test.

## Pioneer 317 . . .

Good all-around corn—vigorous, medium-height plant—medium-low ear-height—long, heavy ears—sound quality corn—long husks—strong shanks—superior standing ability—smut resistant—high yielding corn—showed up exceptionally well in South-Central and Southern sections of 1937 Iowa Corn Yield Test—yielded 101.89 bushels per acre in District 12.

» » » »

*For bigger corn profit plant*







# COMPARATIVE TABLE OF CHARACTERISTICS

## PIONEER HYBRIDS AVAILABLE IN QUANTITY

PIONEER HYBRID NO.	SIZE OF EAR	LENGTH OF HUSK	SMOOTHNESS OF KERNEL	LEAFINESS OF STALK	PIONEER HYBRID NO.	LENGTH OF SHANK	LEAF SMUT RESISTANCE	COLD RESISTANCE	DROUGHT RESISTANCE
355	Medium-Small	Medium	Medium	Medium	355	Long	Fair	Excellent	Good
357	Medium	Long	Medium	Leafy	357	Medium	Excellent	Good	Good
323	Medium-Small	Short	Medium	Medium	323	Long	Good	Excellent	Fair
322	Medium	Long	Medium-Rough	Medium	322	Short	Excellent	Fair	Excellent
315	Medium-Large	Medium-Short	Smooth	Medium	315	Medium	Good to Fair	Excellent	Good
311	Medium-Small	Short	Medium	Medium	311	Long	Fair	Good	Fair
311-A	Medium-Small	Short	Medium	Medium	311-A	Long	Fair	Fair	Good
318	Large	Long	Rough	Medium	318	Short	Good	Good	Good
308-D	Small	Medium	Medium	Medium to Leafy	308-D	Medium	Good	Good	Good
314	Large	Medium	Medium-Rough	Medium	314	Medium	Good to Fair	Excellent	Good
307	Medium	Medium	Medium	Leafy	307	Medium	Excellent	Excellent	Excellent
317	Medium-Large	Long	Smooth	Medium	317	Short	Excellent	Excellent	Excellent

## PIONEER HYBRIDS AVAILABLE IN LIMITED AMOUNTS

352	Medium	Medium	Medium	Medium	352	Medium	Good	Good	Good
350	Medium	Long	Medium	Medium	350	Medium	Good	Good	Good
349	Medium	Short	Medium	Leafy	349	Medium	Fair	Good	Good
335	Medium	Medium	Smooth	Leafy	335	Medium	Good	Excellent	Excellent
322-A	Medium	Long	Rough	Medium	322-A	Short	Excellent	Good	Good
324	Medium	Long	Medium	Medium	324	Medium	Good	Good	Good
321	Large	Medium	Rough	Medium	321	Medium	Good	Good	Good
330	Medium-Large	Long	Rough	Medium	330	Short	Excellent	Good	Good
329	Short-Heavy	Medium	Rough	Medium	329	Medium	Excellent	Good	Good
328	Medium	Medium	Medium	Medium	328	Medium	Excellent	Good	Good
316	Medium	Long	Medium	Medium	316	Short	Good	Excellent	Excellent
312	Small	Long	Medium	Medium	312	Short	Excellent	Good	Excellent
319	Medium	Long	Medium	Medium	319	Short	Excellent	Excellent	Excellent
313	Large	Long	Medium	Medium	313	Short	Excellent	Excellent	Excellent
305-A	Medium-Large	Medium	Smooth	Leafy	305-A	Medium	Good	Good	Excellent

ALL PIONEER HYBRIDS POSSESS STRONG SHANKS . . . THERE ARE PRACTICALLY NO DROPPED EARS IN PIONEER FIELDS



» » *A quarter-century of sound, scientific hybrid corn breeding* « «



# RECORDS OF PIONEER HYBRIDS AVAILABLE IN LIMITED AMOUNTS

LISTED IN ORDER OF MATURITY . . . COMPILED FROM PIONEER TESTS

Popular PIONEER Hybrids 357, 322, and 307 Used as Checks

## NORTHERN SECTION

Pioneer No.	Years Tested	Yield % 357	Moist % 357	Ear Height % 357	*Lodging % 357
O.P.	4	79	102	99	147
352	1	113	103	108	77
350	2	117	103	106	79

In Northeastern Iowa, the Hybrids Below Are Late in Short Seasons

349	2	120	106	124	98
335	4	108	114	97	84

## NORTH-CENTRAL SECTION

		% 322	% 322	% 322	% 322
322-A	2	101	98	100	108
O.P.	4	78	99	104	171
335	1	97	99	82	111
324	2	101	100	96	89
321	1	101	103	105	111
329	2	105	104	89	68
328	2	102	105	91	100
330	1	107	108	90	63

## SOUTH-CENTRAL SECTION

		% 307	% 307	% 307	% 307
324	2	94	88	89	105
321	1	104	91	99	116
O.P.	5	79	99	103	167
316	4	96	102	81	81
312	1	106	105	114	110
319	1	112	108	110	93
313	1	102	112	110	105

## SOUTHERN SECTION

		% 307	% 307	% 307	% 307
O.P.	5	76	99	103	167
312	1	106	105	114	110
319	1	112	108	110	93
313	1	102	112	110	105
305-A	4	102	118	106	110

O. P.—Open-pollinated corn commonly grown in respective sections—inserted only for comparison.

\*In lodging column, the lowest percentage indicates the best lodging resistant hybrid.

NOTE: In the main, the above hybrids are relatively new. Their short time record indicates that they are superior. However, we recommend their use only in limited quantity until they can be tested further.



*breeders make over 175,000 hand pollinations yearly*



# THEIR DESCRIPTION

LISTED IN ORDER OF MATURITY

## Pioneer 352 . . .

Medium-size, wide grained ear with high shelling percentage—early maturing—outstanding yielder—strong rooted—heavy stalked—yielded 118% of open-pollinated corn averages in 1937 Pioneer tests and made unusually good lodging grades.

## Pioneer 350 . . .

Exceptionally high yielding early strain—medium stalk height—good lodging resistance—each stalk has tendency to grow two high quality, rich colored ears that have long husks.

## Pioneer 349 . . .

Highest yielding PIONEER hybrid for Northern Section—first year in commercial production—leafy stalks—good lodging and drought resistant—may show a weakness for smut.

## Pioneer 335 . . .

Vigorous, broad-leafed, short stalked plant—superior yielding ability—low ears—very cold resistant—heavy roots—stiff stalks—best region is second and third row of Iowa Counties from Minnesota border.

## Pioneer 322-A . . .

General-purpose strain—produces rough ears of good diameter—deep kernalled—carries ears at medium-low height—sound yielding—highly smut resistant—quite similar in general characteristics to PIONEER 322.

## Pioneer 324 . . .

Good size, moderately smooth, starchy ears—highly disease resistant—ears of convenient height for hand picking—rigid stalks—hardy roots—strong shanks that hold their ears—shucks which loosen in the fall—ideal for picking.

## Pioneer 321 . . .

Exceptionally good quality grain—large, rough, moderately starchy, rich colored ears—quite stiff stalked—attractive plant appearance—yields about the same as PIONEER 322.

## Pioneer 330 . . .

Extremely uniform, dressy looking hybrid—every plant is the same size and every ear looks alike—high

yielding performance—superior lodging grade—low ear height—rough, deep grained, starchy ears.

## Pioneer 329 . . .

Highest possible quality of marketable corn—low ear height—strong, healthy roots—firm, stiff stalks—coarse grained ears—averaged a yield of 139% of open-pollinated corn in a two-year PIONEER test.

## Pioneer 328 . . .

Very smut resistant—medium size, uniform, good quality ears—moderately starchy grain—low ears—very good yielder.

## Pioneer 316 . . .

Firm, heavy ears of medium size—good husk protection—excellent cold, drought, and lodging resistance—convenient ear height—performed consistently well in South-Central and Southern Sections of 1937 Iowa Corn Yield Test—yielded 100.33 bushels per acre in District 9 and had no dropped ears.

## Pioneer 312 . . .

High yielding hybrid—placed in top division of Southern Section in 1937 Iowa Corn Yield Test—in District 12, it yielded 7.51 bushels per acre more than the average of all hybrid entries, showed low percentage of damaged seed, and had a good lodging grade—moderately smooth ears—somewhat starchy kernels—good quality corn—long husks—smut and drought resistant.

## Pioneer 319 . . .

Highly resistant against smut, cold, and drought—very high yielding—sound quality corn—superior lodging records—long husks that loosen in the fall.

## Pioneer 313 . . .

Averaged 145% of open-pollinated corn in 1937 PIONEER tests—stands up well—strong smut, cold, and drought resistance—no fallen ears—long husks—large, showy, rich creamy colored ears—dark green leaves.

## Pioneer 305-A . . .

Latest maturing PIONEER hybrid—adapted to extreme Southern Iowa—heavy leafage with dark green color—big ears that shell out well—withstands drought and chinch bugs.

» » » » You get more bushels per acre from





# CORN LODGING AND COLD RESISTANCE

## LODGING . . .

### Up-Rooting and Stalk Breaking

Up-rooting and stalk breaking are two common types of corn lodging.

Up-rooting usually occurs in late July when rain is accompanied by heavy wind. Worms and disease, however, can cause root lodging at any time during the growing season. Stalk breaking ordinarily does not appear until October or November after the plants have dried out.

All PIONEER hybrids recommended for commercial growing have been thoroughly tested and proved resistant to both root lodging and stalk breaking. Observations are made for both types of lodging in July and again in October after the corn has ripened.

Lodging percentages listed in the Lodging Columns of Pages 4 and 8 illustrate the relative lodging records of PIONEER hybrids as compared with a superior hybrid recommended as the best all-purpose PIONEER hybrid that can be supplied in quantity to each respective Section of Iowa for the 1939 growing season.

Hybrids with lower lodging percentages do not lodge as much as those having higher percentages. For example, the lodging percentage of PIONEER 355, which is 99% of PIONEER 357, means that PIONEER 355 has 1% fewer fallen plants than PIONEER 357. Notice the high percentage of lodged open-pollinated corn as compared with the base hybrid of each Section.

Heavy-rooted, sturdy stalked PIONEER hybrid corn withstands adverse weather conditions and makes both hand and mechanical picking easier.



UP-ROOTING

## COLD RESISTANT HYBRIDS . . .

A cold, wet spell in early spring after corn is planted often causes low germination. A poor stand results. A poor stand means less yield and reduced yield means less profit.

Cold resistant PIONEER hybrid seed corn makes farmers more certain of getting a good, even stand under cold, wet planting conditions.

For several years, PIONEER has experimented with cold resistant corn. Each spring, cold resistant hybrids are planted for germination tests during the month of March. In 1938, cold resistant PIONEER hybrids, planted March 18, went through an early April snow storm and several hard freezes. What a severe test! Yet these cold resistant hybrids showed strong, vigorous germination. By April 20, the best ones had produced a stand of 85% which equals the average stand of open-pollinated corn under favorable conditions.

The impressive results of this test prove the practical value and importance of cold resisting PIONEER hybrids to corn growing. Cold resistant corn planted in the cornbelt during the month of April germinates strongly and produces a good stand, but, unless the early spring weather is ideal, it does not necessarily yield any more or mature much earlier than corn planted during the first part of May.

Ask PIONEER representatives for proved and tested, cold resistant, reliable germinating PIONEER hybrids. Reduce the chances of a poor stand.

Several cold resistant PIONEER hybrids are available for each of the four Sections of Iowa. The hybrids outstanding for cold resistance and obtainable for 1939 planting are PIONEER 355, 335, 315, 323, 307, and 314.



PLANTED MARCH 20



*. . . Vigorous germinating, sturdy stalked hybrid corn*

# WHICH HYBRID FOR YOUR SOIL CONDITIONS?

PIONEER corn hybrids are adapted to a wide range of soil types and conditions. They have been tested in rich, poor, and sandy soils. PIONEER continually carries on extensive experiments with different soil types, and recommends only hybrids with wide adaptability.

If new hybrids show inability to produce well in many different soil types—if they do not meet the traditionally high standards of PIONEER quality—they never reach commercial production.

No corn produces as well on poor soil as it does on rich ground, but PIONEER corn ordinarily shows an even higher percentage increase over open-pollinated corn on poor soil than it does on rich land.

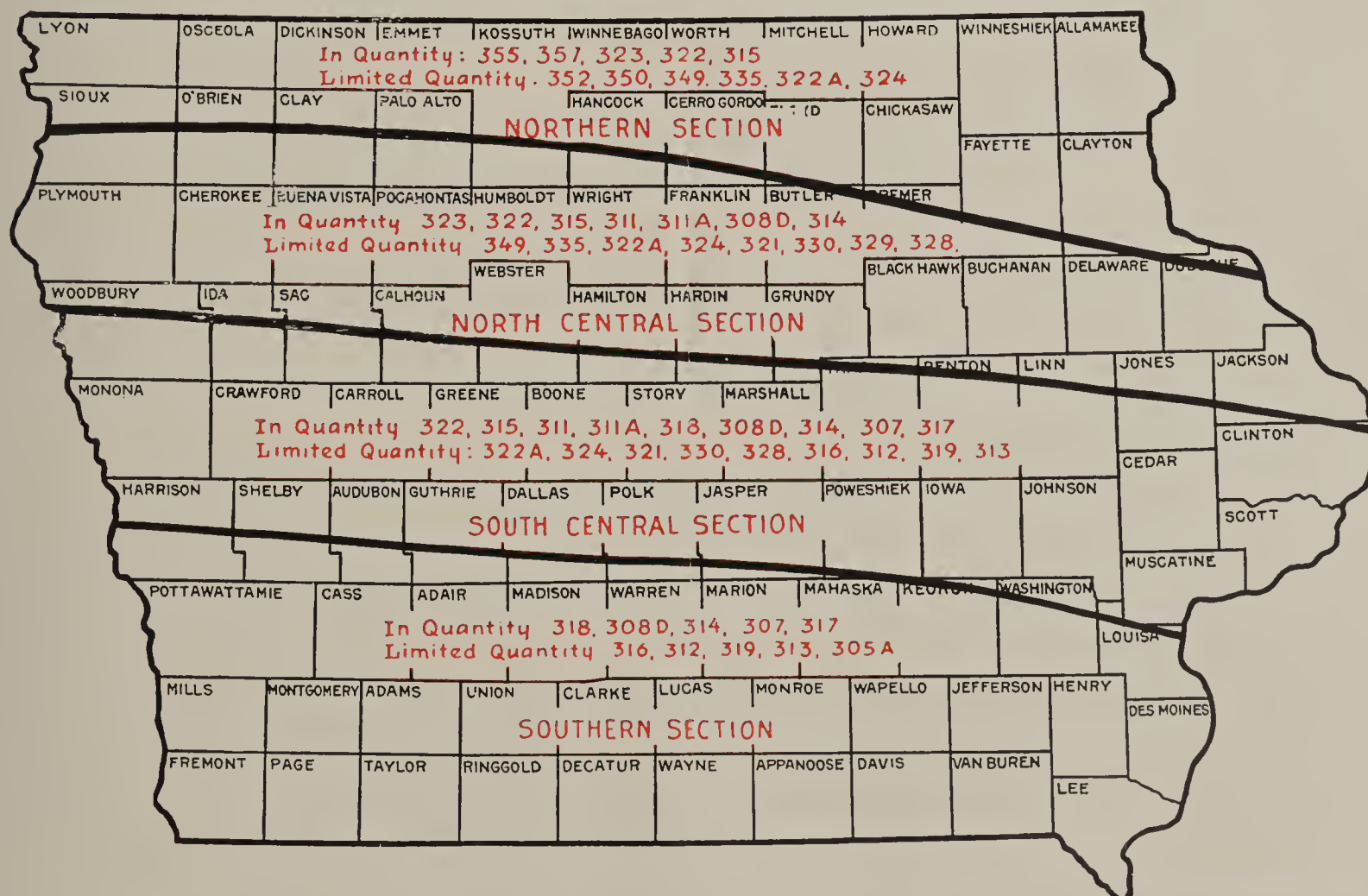
For low fertility soils, PIONEER recommends an earlier maturing hybrid than is ordinarily grown in that section. On this type of soil, earlier corn gets along faster than later corn and produces maximum yields and better quality corn.

PIONEER hybrid recommendations for sandy soils depend greatly on the fertility. High fertility sandy soil with normal warm temperature and sufficient rainfall often pushes corn along faster than heavy, rich loam. Under these conditions, a fairly late corn can be used.

Ask local PIONEER representatives for specific information concerning PIONEER hybrid adaptability to local soil conditions.

## RECOMMENDED PIONEER HYBRIDS BY SECTIONS

LISTED IN ORDER OF MATURITY—EARLIEST FIRST  
SOME AVAILABLE IN QUANTITY, OTHERS IN LIMITED QUANTITY

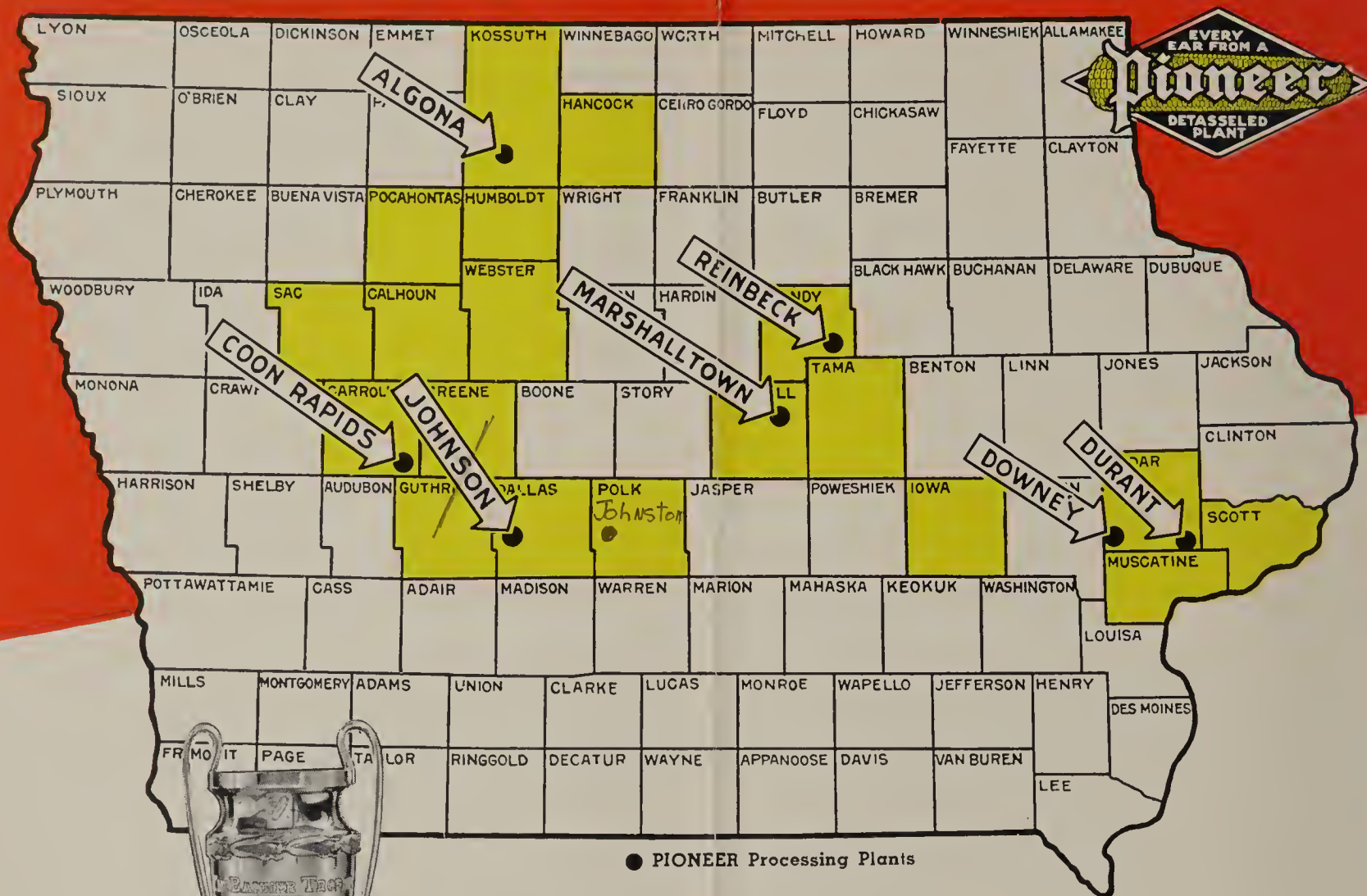


» » Specific brand numbers mark every bag of **Pioneer**



COUNTY LOCATIONS OF 1938

# PIONEER HYBRID SEED CROP



## PIONEER

Won the Banner Trophy in the 1937 Iowa Corn Yield Test . . . A winner eight times since 1925 . . .

Only commercial producer of hybrid seed corn ever to win the BANNER TROPHY.

## PIONEER HI-BRED CORN COMPANY

1011 LOCUST STREET  
DES MOINES, IOWA

WRITE TO MAIN OFFICE OR SEE LOCAL PIONEER REPRESENTATIVE FOR PRICES AND ADDITIONAL INFORMATION